TITLE 9. ENVIRONMENT

VIRGINIA WASTE MANAGEMENT BOARD

Final Regulation

Title of Regulation: **9 VAC 20-85. Coal Combustion Byproduct Regulations (amending 9 VAC 20-85-20, 9 VAC 20-85-30, 9 VAC 20-85-40, and 9 VAC 20-85-60 through 9 VAC 20-85-170).**

Statutory Authority: § 10.1-1402 of the Code of Virginia, 42 USC § 6941 and 40 CFR Part 257.

Effective Date: November 29, 2006.

CHAPTER 85.
[~~REGULATIONS GOVERNING MANAGEMENT OF~~]
COAL COMBUSTION [~~BY-PRODUCTS~~ BYPRODUCT REGULATIONS].

9 VAC 20-85-20. Definitions.

In addition to the definitions incorporated by reference, the following words and terms shall have, for the purpose of this chapter, the following meanings:

"ASTM" means the American Society for Testing and Materials.

"CCB" means coal combustion byproducts.

~~"CCB site" means all land and structures, other appurtenances, and improvements on them used to manage CCB by the methods included in either 9 VAC 20-85-40 A or B.~~

"Closure" means the act of securing a ~~CCB~~ fossil fuel combustion products site pursuant to the requirements of this chapter.

"Coal combustion byproducts" means residuals, including fly ash, bottom ash, boiler slag, and flue gas emission control waste produced by coal-fired electrical or steam generating units.

["Department" means the Department of Environmental Quality.]

"Director" means the Director of the Department of Environmental Quality or the Director of the Department of Mines, Minerals and Energy depending on the context.

"Fossil fuel combustion products" means coal combustion byproducts as defined in this regulation, coal combustion byproducts generated at facilities with fluidized bed combustion technology, petroleum coke combustion byproducts, byproducts from the combustion of oil, byproducts from the combustion of natural gas, and byproducts from the combustion of mixtures of coal and "other fuels" (i.e., co-burning of coal with "other fuels" where coal is at least 50% of the total fuel). For purposes of this definition, "other fuels" means waste-derived fuel product, auto shredder fluff, wood wastes, coal mill rejects, peat, tall oil, tire-derived fuel, deionizer resins, and used oil.

"Fossil fuel combustion products site" means all land and structures, other appurtenances, and improvements on them used to manage fossil fuel combustion products by the methods included in either 9 VAC 20-85-40 A or B.

"Perennial stream" means a stream or part of a stream that flows continuously during all of the calendar year as a result of groundwater discharge or surface runoff.

"Speculatively accumulated material" means any material that is accumulated before being used, reused, or reclaimed or in anticipation of potential use, reuse, or reclamation. ~~CCB~~ Fossil fuel combustion products are not being accumulated speculatively when they can be used, reused, or reclaimed, have a feasible means of use, reuse, or reclamation available and 75% of the accumulated ~~CCB~~ fossil fuel combustion products are being removed from the storage annually.

"TCLP" means a chemical analytical procedure described in the Virginia Hazardous Waste Management Regulations, 9 VAC 20-60~~-10 et seq~~.

"Waste derived fuel product" means a solid waste or combination of solid wastes that have been treated (altered physically, chemically, or biologically) to produce a fuel product with a minimum heating value of 5,000 BTU/lb. Solid wastes used to produce a waste derived fuel product must have a heating value, or act as binders, and may not be added to the fuel for the purpose of disposal. Waste ingredients may not be listed or characteristic hazardous wastes. The fuel product must be stable at ambient temperature, and not degraded by exposure to the elements. This material may not be "Refuse Derived Fuel (RDF)" as defined in 9 VAC 5-40-890.

9 VAC 20-85-30. Purpose.

The purpose of this chapter is to provide for the use of fossil fuel combustion products including coal combustion byproducts (CCB) and to establish appropriate standards for siting, design, construction, operation, and administrative procedures pertaining to their use, reuse, or reclamation.

9 VAC 20-85-40. Applicability.

A. This chapter applies to all persons who use, reuse, or reclaim ~~CCB~~ fossil fuel combustion products by applying them to or placing them on land in a manner other than addressed in the Virginia Solid Waste Management Regulations, 9 VAC 20-80-150 and 9 VAC 20-80-160. 9 VAC 20-80-150 provides for the beneficial use of waste materials such as fossil fuel combustion products, and 9 VAC 20-80-160 provides for conditional exemptions from regulation for fossil fuel combustion products.

B. This chapter establishes minimum standards for the owners or operators of coal mining facilities that accept CCB for mine reclamation or mine refuse disposal on a mine site permitted by the Virginia Department of Mines, Minerals and Energy (DMME) unless otherwise exempt under 9 VAC 20-80-160 B of the Solid Waste Management Regulations. If the permit issued by the DMME in accordance with the Virginia Surface Mining Regulations, 4 VAC 25-130-700.1 et seq., specifies the applicable conditions set forth in Parts III and IV of this chapter, the permittee is exempt from this chapter.

C. Conditions of applicability are as follows:

1. Persons using ~~CCB~~ fossil fuel combustion products other than in a manner prescribed under this chapter, or managing ~~CCB~~ fossil fuel combustion products containing any constituent at a level exceeding levels set forth in Table 1 in Part IV of this chapter, shall manage their waste in accordance with all applicable provisions of the Virginia Solid Waste Management Regulations, 9 VAC 20-80~~-10 et seq.~~;

2. Materials which are accumulated speculatively, materials which are not utilized in a manner described in the operation plan required by 9 VAC 20-85-90 of this chapter, and off-specification materials which cannot be utilized or reprocessed to make them usable shall be managed in accordance with all appropriate provisions of the Virginia Solid Waste Management Regulations, 9 VAC 20-80~~-10 et seq.~~; and

3. Storage, stockpiling, and other processing or handling of ~~CCB~~ fossil fuel combustion products, which may need to occur prior to their final placement or use, reuse, or reclamation, shall be in a manner necessary to protect human health and safety and the environment. For projects permitted by the DMME, the storage, stockpiling, or handling of CCB shall be managed in accordance with the Virginia Surface Mining Regulations, 4 VAC 25-130-700.1 et seq.

9 VAC 20-85-60. Enforcement and appeals.

A. All administrative enforcement and appeals taken from actions of the [~~director~~ department] relative to the provisions of this chapter shall be governed by the Virginia Administrative Process Act (§ ~~9-6.14:1~~ 2.2-4000 et seq. of the Code of Virginia).

B. The owner or operator of the ~~CCB~~ fossil fuel combustion products site who violates any provision of this chapter will

be considered to be operating an unpermitted facility as provided for in 9 VAC 20-80-90 of the Solid Waste Management Regulations and shall be required to either obtain a permit as required by Part VII or close under Part V of this chapter.

C. The requirement to obtain a permit or to close the project shall not preclude additional action for remediation or enforcement, including (without limitations) the assessment of civil charges or civil penalties, as is otherwise authorized by law.

9 VAC 20-85-70. Locational restrictions.

~~Coal combustion byproducts~~ Fossil fuel combustion products used, reused, or reclaimed on or below ground shall not be placed:

1. In areas subject to base floods unless it can be shown that ~~CCB~~ fossil fuel combustion products can be protected from inundation or washout and that flow of water is not restricted;

2. With the vertical separation between the ~~CCB~~ fossil fuel combustion products and the maximum seasonal water table or bedrock less than two feet;

3. Closer than:

a. 100 feet of any perennial stream,

b. 100 feet of any water well (other than a monitoring well) in existence at the onset of the project,

c. 25 feet of a bedrock outcrop, unless the outcrop is properly treated to minimize infiltration into fractured zones,

d. 100 feet of a sinkhole, or

e. 25 feet from any property boundary or, in the case of projects permitted by the DMME, 25 feet from the permit boundary.

(NOTE: All distances are to be measured in the horizontal plane.)

4. In wetlands, unless applicable federal, state and local permits are obtained; and

5. On the site of an active or inactive dump, unpermitted landfill, lagoon, or similar facility, even if such facility is closed.

9 VAC 20-85-80. Design and construction.

This section prescribes design and construction standards for ~~CCB~~ fossil fuel combustion products sites. The owner or operator of such a site shall ~~prepare~~ submit appropriate design plans, specifications and a design report that address, at a minimum, the requirements contained in this section.

1. A survey benchmark shall be identified and its location referenced on drawings and maps of the site.

2. During construction and filling, off-site runoff shall be diverted around the use, reuse or reclamation areas. The uncovered active ~~CCB~~ fossil fuel combustion products fill areas shall be graded to a maximum slope of 5.0% and a smooth surface maintained to provide for sheet flow runoff and to prevent dusting. Runoff from the use, reuse or reclamation area shall be controlled and contained by use of diversion ditches, sediment traps, berms or collection ponds in accordance with the site erosion control plan. The use, reuse, or reclamation projects shall be designed to divert surface water run on from a 25-year, 24-hour storm event. For projects permitted by the DMME, the standards for runon, grading, and runoff shall be in accordance with the Coal Surface Mining Reclamation Regulations, 4 VAC 25-130-700.1 et seq.

3. Finished side slopes shall be stable and be configured to adequately control erosion and runoff. Side slopes of 33% will be allowed provided that adequate runoff controls are established. Steeper side slopes may be considered if supported by necessary stability calculations and appropriate erosion and runoff control features. All finished slopes and runoff management units shall be supported by necessary calculations and included in the design report.

4. The finished top slope shall be at least 2.0% to prevent ponding of water, except where covered by a building, a paved roadway, a paved parking surface, paved walkways or sidewalks, or similar structures.

5. Specifications prepared by a registered professional engineer shall be provided that indicate the criteria for the placement of the fossil fuel combustion products based on the intended use of the site. Specifications will include lab and field testing to be performed, testing frequency based on the nature and source of the materials, and the required performance of the material based on the intended use of the site. All test methods will be in accordance with [~~ASTM~~ the Standard Guide for Design and Construction of Coal Ash Structural Fills, American Standard Test Method E2277-03 et seq., where applicable].

~~5.~~ 6. Upon reaching the final grade, the placed material shall be covered in accordance with the requirements of Article 4 of this part.

9 VAC 20-85-90. Operations.

The owner or operator of a ~~CCB~~ fossil fuel combustion products site shall prepare an operation plan. At a minimum, the plan shall address the requirements contained in this section.

1. Tracking of mud or ~~CCB~~ fossil fuel combustion products onto public roads from the site shall be controlled at all times to minimize nuisances.

2. The addition of any solid waste including but not limited to hazardous, infectious, construction, debris, demolition,

industrial, petroleum-contaminated soil, or municipal solid waste to ~~CCB~~ fossil fuel combustion products is prohibited. This prohibition does not apply to solid wastes from the extraction, beneficiation and processing of ores and minerals conditionally exempted under 9 VAC 20-80-160 A 2 of the Solid Waste Management Regulations.

3. Fugitive dust shall be controlled at the site so it does not constitute nuisances or hazards.

4. After preparing the subbase, ~~CCB~~ fossil fuel combustion products shall be placed ~~in no greater than 12 inch layers. The CCB shall then be compacted to a minimum 95% of the maximum dry density achievable at its optimum moisture content in accordance with the Standard Proctor method, ASTM test designation D 698, or to a minimum of 80% relative density as determined by ASTM test designation D 4254 for coal combustion bottom ash and boiler slag. Field compaction tests shall be taken for each 5,000 cubic yards placed~~ uniformly and compacted to standards, including insitu density, compaction effort and relative density as specified by a registered professional engineer based on the intended use of the fossil fuel combustion products. The placement and compaction of CCB on coal mine sites shall be subject to the applicable requirements of the Coal Surface Mining Reclamation Regulations, 4 VAC 25-130-700.1 et seq.

5. A surface run on and runoff control program shall be implemented to control and reduce the infiltration of surface water through the ~~CCB~~ fossil fuel combustion products and to control the runoff from the placement area to other areas and to surface waters.

6. Runoff shall not be permitted to drain or discharge into surface waters except when in accordance with 9 VAC 25-10-10 et seq., of the State Water Control Board, or otherwise approved by the department.

7. ~~CCB~~ Fossil fuel combustion products site development shall be in accordance with the Virginia Erosion and Sediment Control Regulations, 4 VAC 50-30~~-10 et seq.~~, or the Coal Surface Mining Reclamation Regulations, 4 VAC 25-130-700.1 et seq., as applicable.

9 VAC 20-85-100. General.

Upon reaching the final grade, the owner or operator of a ~~CCB~~ fossil fuel combustion products site shall close his project in a manner that minimizes the need for further maintenance.

9 VAC 20-85-110. Exemptions from the closure requirements.

A. An owner or operator of a site that constructs a building, a paved roadway, a paved parking surface, paved walkways and sidewalks, or other similar structures on top of the fill within a reasonable time period of reaching the final grade not to exceed 12 months shall be exempt from the requirements of this article for the portions of the ~~CCB~~ fossil fuel combustion products site directly under the construction area.

B. An operator of a coal mine site permitted by the DMME who is reclaiming a site in conformance with the Coal Surface Mining Reclamation Regulations, 4 VAC 25-130-700.1 et seq., shall be exempt from the closure requirements contained in the section.

9 VAC 20-85-120. Closure criteria.

A. The owner or operator shall install a final cover system that is designed and constructed to:

1. Minimize infiltration through the closed ~~CCB~~ fossil fuel combustion products site by the use of an infiltration layer that contains a minimum 12 inches of earthen material; and

2. Minimize erosion of the final cover by the use of an erosion control layer that contains a minimum of six inches of earthen material and is capable of sustaining the growth of indigenous plant species or plant species adapted to the area.

B. The use of the property after closure shall not disturb the integrity of the final cover, unless the purpose of the disturbance is to construct buildings, paved roadways, paved parking surfaces, paved walkways and sidewalks, or other similar facilities.

C. Within 90 days after placement of the final cover is complete, the owner or operator shall submit:

1. To the local land recording authority, a survey plat prepared by a professional land surveyor registered by the Commonwealth, indicating the location and dimensions of the placement areas. The plat filed with the local land recording authority shall contain a note, prominently displayed, which states the owner's or operator's future obligation to restrict disturbance of the site.

2. To the department, a statement signed by a registered professional engineer that construction has been completed in accordance with [and meeting the requirements of (i)] the design plans, specifications, and the design report [of 9 VAC 20-85-80, (ii) 9 VAC 20-85-90 (operational requirements)] and [~~a report prepared to satisfy and certified by a registered professional engineer documenting that the requirements of 9 VAC 20-85-80 and closure has been performed in accordance with closure plan prepared under 9 VAC 20-85-130 have been met~~ [(iii) 9 VAC 20-85-100 through 9 VAC 20-85-140 (closure requirements)].

9 VAC 20-85-130. Closure plan and amendment of plan.

A. The owner or operator of the ~~CCB~~ fossil fuel combustion products site shall have a written closure plan. This plan shall identify the steps necessary to completely close the site. The plan shall include, at least, a schedule for final closure including, as a minimum, the anticipated date when ~~CCB~~

fossil fuel combustion products will no longer be received, the date when completion of final closure is anticipated, and intervening milestone dates.

B. The owner or operator may amend his plan at any time during the active life of the project. The owner or operator shall so amend his plan any time changes in operating plans or project design affect the closure plan.

C. At any time during the operating life of the project, the plan shall be made available to the department upon request [~~of the director~~].

9 VAC 20-85-140. Time allowed for closure.

The owner or operator shall complete closure activities in accordance with the closure plan and within six months after receiving the final volume of ~~CCB~~ fossil fuel combustion products. The [~~director~~ department] may approve a longer closure period if the owner or operator can demonstrate that the required or planned closure activities will, of necessity, take longer than six months to complete; and that he has taken all necessary steps to eliminate any significant threat to human health and the environment from the unclosed but inactive project.

9 VAC 20-85-150. General.

A. Notwithstanding any provisions of Part VII of the Virginia Solid Waste Management Regulations, 9 VAC 20-80~~-10 et seq.~~, the owner or operator of a site which manages only ~~CCB~~ fossil fuel combustion products allowed under 9 VAC 20-85-40 shall not be required to have a solid waste management facility permit, neither must a ~~CCB~~ fossil fuel combustion products facility operator certified by the Board for Waste Management Facility Operators directly supervise operations at the site, if the owner or operator at least 30 days prior to initial placement of ~~CCB~~ fossil fuel combustion products [provides to the appropriate department regional office and verifies receipt of]:

1. [~~Provides the director a~~ A] certification that [~~he~~ it] has legal control over the ~~CCB~~ fossil fuel combustion products site for the project life and the closure period. For the purposes of this section, on a coal mine site permitted by the DMME, demonstration of legal right to enter and begin surface coal mining and reclamation operations shall constitute compliance with the provisions of this section.

2. [~~With the exception of projects permitted by the DMME, provides the director the~~ A] certification from the governing body of the county, city, or town in which the ~~CCB~~ fossil fuel combustion products site is to be located that the location and operation of the ~~CCB~~ fossil fuel combustion products site are consistent with all applicable ordinances [, with the exception of projects permitted by the DMME].

3. [~~Provides the director with a~~ A] general description of the intended use, reuse, or reclamation of ~~CCB~~ fossil fuel combustion products. Such description will include:

a. A description of the nature, purpose and location of the ~~CCB~~ fossil fuel combustion products site, including a topographic map showing the site area and available soils, and geological maps. The description shall include an explanation of how ~~CCB~~ fossil fuel combustion products will be stored prior to use, reuse or reclamation, if applicable;

b. The estimated beginning and ending dates for the operation;

c. An estimate of the volume of the ~~CCB~~ fossil fuel combustion products to be utilized; and

d. A description of the proposed type of ~~CCB~~ fossil fuel combustion products to be used, reused or reclaimed, including physical and chemical characteristics of the ~~CCB~~ fossil fuel combustion products. The chemical description shall contain the results of TCLP analyses for the constituents shown in Table 1. The description shall also contain a statement that the project will not manage ~~CCB~~ fossil fuel combustion products that contain any constituent at a level exceeding those shown in the table.

TABLE 1.
LIST OF CONSTITUENTS AND MAXIMUM LEVELS.

Constituent	Level, mg/lit
Arsenic	5.0
Barium	100
Cadmium	1.0
Chromium	5.0
Lead	5.0
Mercury	0.2
Selenium	1.0
Silver	5.0

[~~4. Provides the director with a~~ A] certification by a professional engineer licensed to practice by the Commonwealth that the project meets the locational restrictions of 9 VAC 20-85-70. Such certificate shall contain no qualifications or exemptions from the requirements.

5. [~~Furnishes to the director a~~ A] certificate signed by a professional engineer licensed to practice by the Commonwealth that the project has been designed in accordance with the standards of 9 VAC 20-85-80 if applicable. Such certificate shall contain no qualifications or exceptions from the requirements and plans.

6. [~~Submits to the director an~~ An] operational plan describing how the standards of [~~9 VAC 20-85-80~~ 9 VAC 20-85-90] will be met.

7. [~~Submits to the director a~~ A] closure plan describing how the standards of Article 4 of Part III of this chapter will be met, if applicable.

8. [~~Submits to the director a~~ A] signed statement that the owner or operator shall allow authorized representatives of the Commonwealth, upon presentation of appropriate credentials, to have access to areas in which the activities covered by this chapter will be, are being, or have been conducted to ensure compliance.

B. The materials submitted under the provisions of subsection A of this section will be evaluated for completeness within 30 days of receipt by the [appropriate] department [regional office]. [~~Placement of the fossil fuel combustion products may begin after the director has determined that the materials submitted address the requirements of subsection A of this section.~~ If the department notifies the applicant of deficiencies within 30 days, the applicant shall postpone any construction or activities proposed in the application for the department's approval until the department's approval has been received. If the applicant has not received a notice of deficiency within 30 days, the applicant can proceed.]

9 VAC 20-85-160. Project modifications.

The owner or operator of a ~~CCB~~ fossil fuel combustion products site may modify the design and operation of the project by furnishing the department a new certificate required by subdivision A 5 of 9 VAC 20-85-150 and a new operational plan required by subdivision 6 of 9 VAC 20-85-150. Whenever modifications in the design or operation of the project affect the provisions of the closure plan, the owner or operator shall prepare an amended plan in accordance with the requirements of Article 4 of Part III of this chapter.

9 VAC 20-85-170. Applicability.

The [~~director~~ department] may grant a variance from any requirement contained in Part III of this chapter to the owner or operator of the ~~CCB~~ fossil fuel combustion products site if he demonstrates to the satisfaction of the [~~director~~ department] that granting the variance will not result in an additional risk to the public health or the environment beyond the risk which would be imposed without the variance.

[DOCUMENTS INCORPORATED BY REFERENCE

Standard Guide for Design and Construction of Coal Ash Structure Fills, American Standard Test Method E2277-03, ASTM International, 100 Bar Harbor Drive, West Conshohocken, PA 19428-2959.

~~STANDARD Proctor Method.~~

~~Test Designation D698, ASTM.~~

~~Test Designation D4254, ASTM.~~]

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